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APPLICANTS: Shaw et al.

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EXAMINER: Maher M. Haddad, Ph.D.

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FOR: PLATELET GLYCOPROTEIN IB ALPHA FUSION POLYPEPTIDES
AND METHODS OF USE THEREOF

Assistant Commissioner for Patents
Washington, D.C. 20031

Response to November 4, 2003 Office Action

This amendment accompanies a request for continued examination and is further to the Notice of Appeal filed May 4, 2004.

In response to the Office Action mailed November 4, 2003 ("Office Action"), please amend the application as follows and consider the following remarks.

Amendments to the claims are reflected in the listing of claims, which begins on page 2.

Remarks are shown starting on page 8.

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Claim 1 (currently amended): A fusion polypeptide comprising a first polypeptide operably linked to a second polypeptide,
wherein the first polypeptide comprises a polypeptide sequence with at least 85% homology to an extracellular portion of a glycoprotein I $\beta\alpha$ polypeptide of SEQ ID NO:1, provided said glycoprotein I $\beta\alpha$ polypeptide includes an amino acid other than glycine at position 233 or other than methionine at position 239 relative to the amino acid sequence of a wild-type GPI $\beta\alpha$ polypeptide, and said first polypeptide binds a polypeptide selected from the group consisting of leukocyte integrin Mac-1 polypeptide, von Willebrand factor, thrombin and P-selectin; and

wherein the second polypeptide comprises at least a region of an immunoglobulin heavy chain polypeptide.

Claim 2 (cancelled)

Claim 3 (previously amended): The fusion polypeptide of claim 1, wherein said first polypeptide binds to at least two of the polypeptides selected from the group consisting of leukocyte integrin Mac-1 polypeptide, von Willebrand factor, thrombin and P-selectin.

Claim 4 (cancelled)

Claim 5 (previously amended): The fusion polypeptide of claim 1, wherein said polypeptide comprises SEQ ID NO: 5.

Claim 6 (previously amended): The fusion polypeptide of claim 1, wherein said fusion polypeptide is more resistant to proteolysis than a wild-type GP I α polypeptide.

Claim 7. (original): The fusion polypeptide of claim 1, wherein said first polypeptide binds with higher affinity to a von Willebrand factor polypeptide than a wild-type glycoprotein I α polypeptide binds to said von Willebrand factor polypeptide.

Claim 8 (original): The fusion polypeptide of claim 1, wherein said first polypeptide comprises at least one of the amino acid substitutions G233V or M239V relative to the amino acid sequence of a wild-type GPI α polypeptide.

Claim 9 (previously amended): The fusion polypeptide of claim 1, wherein said first polypeptide comprises the amino acid substitutions G233V and M239V relative to the amino acid sequence of a wild-type GPI α polypeptide.

Claim 10 (cancelled)

Claim 11 (original): The fusion polypeptide of claim 1, wherein said second polypeptide comprises an Fc region of an immunoglobulin heavy chain.

Claim 12 (original): The fusion polypeptide of claim 11, wherein said second polypeptide has less effector function than the effector function of a Fc region of a wild-type immunoglobulin heavy chain.

Claim 13 (original): The fusion polypeptide of claim 12, wherein said second polypeptide binds with low or no affinity to a Fc receptor.

Claim 14 (original): The fusion polypeptide of claim 12, wherein said second polypeptide binds with low or no affinity to complement protein C1q.

Claims 15-19 (cancelled)

Claim 20 (currently amended): The fusion polypeptide of claim 1, wherein said fusion polypeptide comprises the amino acid sequence of ~~GPIba302-Ig (SEQ ID NO:1)~~ ~~GPIba302/2A-Ig (SEQ ID NO:2)~~, ~~GPIba302/4X-Ig (SEQ ID NO:3)~~, ~~GPIba290-Ig (SEQ ID NO:4)~~, ~~or GPIba290/2V-Ig (SEQ ID NO:5)~~ ~~or GPIba290/1A-Ig (SEQ ID NO:6)~~.

Claim 21 (original): A multimeric polypeptide comprising the fusion polypeptide of claim 1.

Claim 22 (original): The multimeric polypeptide of claim 21, wherein said multimeric polypeptide is a dimer.

Claims 23-26 (cancelled)

Claim 27 (original): A pharmaceutical composition comprising the fusion polypeptide of claim 1.

Claim 28-53 (cancelled)

Claim 54 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds at least three polypeptides selected from the group consisting of leukocyte integrin Mac-1 polypeptide, von Willebrand factor, thrombin and P-selectin.

Claim 55 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds leukocyte integrin Mac-1 polypeptide, von Willebrand factor, thrombin and P-selectin.

Claim 56 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds leukocyte integrin Mac-1 polypeptide.

Claim 57 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds von Willebrand factor.

Claim 58 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds thrombin.

Claim 59 (previously added) The fusion polypeptide of claim 1, wherein said first polypeptide binds P-selectin.

Claim 60 (currently amended): A fusion polypeptide comprising a first polypeptide operably linked to a second polypeptide,

wherein the first polypeptide consists essentially of a polypeptide sequence with at least 85% homology to an extracellular portion of a glycoprotein Iba polypeptide of SEQ ID NO:1, provided said glycoprotein Iba polypeptide includes an amino acid other than glycine at position 233 or other than methionine at position 239 relative to the amino acid sequence of a wild-type GPIba polypeptide and said first polypeptide binds von Willebrand factor polypeptide; and

wherein the second polypeptide consists essentially of an immunoglobulin heavy chain polypeptide, wherein said immunoglobulin heavy chain polypeptide comprises a Fc region.

Claims 61-62 (cancelled).

63. (newly added) A polypeptide consisting essentially of the amino acid sequence of SEQ ID NO:1.

64. (newly added): The polypeptide of claim 63, wherein the amino acid sequence of the polypeptide consists of SEQ ID NO:1.

65. (newly added) A polypeptide consisting essentially of the amino acid sequence of SEQ ID NO:5.

66. (newly added): The polypeptide of claim 65, wherein the amino acid sequence of the polypeptide consists of SEQ ID NO:5.